



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/738,543	12/17/2003	Torsten Gottschalk-Gaudig	WAS 0611 PUS / Wa 10239-S	8271
22045	7590	12/10/2007	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			TSOY, ELENA	
			ART UNIT	PAPER NUMBER
			1792	
			MAIL DATE	DELIVERY MODE
			12/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/738,543

Applicant(s)

GOTTSCHALK-GAUDIG ET AL.

Examiner

Elena Tsoy

Art Unit

1792

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 30 November 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 7.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

ELENA TSOY  
PRIMARY EXAMINER

*E Tsoy*

### **Advisory Action**

The amendment filed on November 30, 2007 under 37 CFR 1.116 in reply to the final rejection has been entered and considered but is not deemed to place the application in condition for allowance for the reasons of record set forth in the Final Office Action mailed on 8/31/2007.

### ***Response to Arguments***

Applicants' arguments filed November 30, 2007 have been fully considered but they are not persuasive.

Claim 7 has been rejected under 35 U.S.C. § 102(b) over Barthel et al. U.S. Patent 5,686,054 ("Barthel") and under 35 U.S.C. § 102(b) over Tojo et al. U.S. Patent 5,278,204 ("Tojo").

(A) Applicants traverse both these rejections. For rejections based on 35 U.S.C. § 102(b) the standard is "strict identity", and thus cases involving anticipation are "quite rare".

The Examiner respectfully disagrees with this argument. In contrast to Applicants statement, Claim 7 has been rejected under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Barthel et al/Tojo et al.

(B) Applicants argue that neither Barthel nor Tojo disclose any contact angle. Neither Barthel nor Tojo disclose any surface coverage. Neither Barthel nor Tojo disclose any surface silanol density between 0.9 and 1.7 (Barthel discloses a value of 0). Neither Barthel nor Tojo disclose the range of carbon content of greater than 0 to less than 2.0 weight percent. Neither Barthel nor Tojo disclose a methanol number less than 30 (Barthel requires a methanol number greater than or equal to 50, preferably higher). It is clear that neither reference anticipates through its literal disclosure.

The Examiner respectfully disagrees with this argument. As was discussed in the Final Office Action, Claim 7 is at least obvious over Barthel nor Tojo.

#### **Barthel et al**

Barthel et al teach a hydrophobic silica with a specific surface area of e.g. 200 m<sup>2</sup>/g (**as in Applicants' invention**) (See column 11, lines 1-6) with a silylating agent of claimed formula  $R^1_nSiX_{4-n}$  in an amount of 2-100 parts by weight per 100 parts of silica (See column 6, lines 41-

Art Unit: 1792

45) that **overlaps Applicants range** of 2-3 parts per 100 parts of silica. Clearly, the degree of hydrophobicity of silylated silica would depend on the amount of silylating agent: silica treated with an amount of silane in lower part of the range would be less hydrophobic than treated with an amount of silane in higher part of the range. Therefore, if partly hydrophobic silica is desired, the silylating agent should be used with e.g. 2-3 parts per 100 parts of above described silica.

*If the use of 2-3 parts of silane per 100g of silica could be argued*, it is well settled that **overlapping** ranges are *prima facie* evidence of obviousness. *In re Malagari*, 184 USPQ 549 (CCPA 1974). Therefore, it would have been obvious to one having ordinary skill in the art to have selected the portion of Barthel et al's range that corresponds to the claimed range.

It is the Examiner's position that *pyrogenic* silica having 200 m<sup>2</sup>/g (See column 11, lines 1-6) treated with silane of claimed formula R<sup>1</sup><sub>n</sub>SiX<sub>4-n</sub> in an amount of the portion of Barthel et al's range that corresponds to the claimed range, per 100 parts of silica would have all claimed properties because the process of Barthel et al would be substantially identical to that of claimed invention (See Example 1 of the specification as originally filed). Namely, the treated silica would have a contact angle  $\theta$  in air for water of less than 180<sup>0</sup>, the degree of coverage  $\tau$  of the surface of the silica with silylating agent residues, based on the total silica particle surface area, being 1% <  $\tau$  < 50%, the density of the surface silanol groups SiOH ranging between a minimum of 0.9 and a maximum of 1.7 SiOH/nm<sup>sup.2</sup> particle surface area, and the particles having a carbon content of less than 0.1% by weight and up to 20% by weight, and a methanol number of less than 30.

### Tojo et al

Tojo discloses that per 100 m<sup>2</sup>/g of silica, the silane should be added in an amount from 0.027-1.38 mmol/g to 0.009-0.46 mmol/g so as to achieve a carbon content of 0.1% -5% by weight, i.e. a process which is substantially identical to that of claim 1 except for overlapping range of an amount of a silane. However, **overlapping** ranges are considered to be *prima facie* obvious. It is well settled that **overlapping** ranges are *prima facie* evidence of obviousness. *In re Malagari*, 184 USPQ 549 (CCPA 1974). Therefore, it would have been obvious to one having

Art Unit: 1792

ordinary skill in the art to have selected the portion of Tojo et al's range that corresponds to the claimed range.

It is the Examiner's position that dry method silica having treated with silane of claimed formula  $R^nSiX_{4-n}$  in an amount of the portion of Tojo et al's range that corresponds to the claimed range, per 100 parts of **silica would have all claimed properties** because the process of Tojo et al would be substantially identical to that of claimed invention

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy, Ph.D.  
Primary Examiner  
Art Unit 1792

ELENA TSOY  
PRIMARY EXAMINER  
*E. Tsoy*

December 3, 2007